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<u>L3</u>	((logical or virtual) adj1 (ID or identification or number)) same quer\$3 same process	11	<u>L3</u>
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2 On context-based naming in information bases*Theodorakis, M.; Constantopoulos, P.;*

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Research Issues in Data Engineering, 1996. Interoperability of Nontraditional Database Systems. Proceedings. Sixth International Workshop on , 26-27 Feb 1996
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[\[Abstract\]](#) [\[PDF Full-Text \(904 KB\)\]](#) [IEEE CNF](#)**12 Dynamic finite versioning: an effective versioning approach to concurrent transaction and query processing***Wu, K.-L.; Yu, P.S.; Chen, M.-S.;*

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Consistent view removal in transparent schema evolution systems

Crestana-Taube, V. Rundensteiner, E.A.

Dept. of Electr. Eng. & Comput. Sci., Michigan Univ., Ann Arbor, MI, USA;

*This paper appears in: Research Issues in Data Engineering, 1996.***Interoperability of Nontraditional Database Systems. Proceedings. Sixth International Workshop on**

Meeting Date: 02/26/1996 - 02/27/1996

Publication Date: 26-27 Feb. 1996

Location: New Orleans, LA USA

On page(s): 138 - 147

Reference Cited: 13

Inspec Accession Number: 5250281

Abstract:

We have developed the transparent schema evolution (TSE) system that, simulating schema evolution using object-oriented views, allows for the interoperability of applications with diverse and even changing requirements. TSE relieves users of making existing application programs obsolete when run against the modified database because the old view schema is maintained while a new view schema is generated. TSE captures the changes desired by the user. However TSE may be generating a large number of schema versions (object-oriented view schemata) over time, resulting in an excessive build-up of classes and underlying object instances-some of which may potentially no longer be in use. We propose to solve this problem by developing techniques for effective and consistent schema removal. First, we characterize potential problems of schema consistency that could be caused by removal of a virtual class; and then outline our solution approach for each of these problems. We demonstrate that view schema removal is sensitive to the order in which classes are processed. Our solution to this problem is the development of a graph model for capturing the class relationships, used as a foundation for selecting among removal sequences. Designed to optimize the performance of the TSE for effective schema version removal, the proposed techniques will enable more interoperability among evolving software applications.

Index Terms:

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L6: Entry 1 of 1

File: USPT

Jun 22, 1999

DOCUMENT-IDENTIFIER: US 5915008 A

TITLE: System and method for changing advanced intelligent network services from customer premises equipment

Detailed Description Text (48):

According to the present invention, a service creation system, such as the SPACE system 54 or an Operational Support System, provisions the NAP 11, the firewall server 40, also referred to as the proxy server, and preferably the ISCP, to route a call to a predetermined virtual number to be terminated to the firewall server. The access server 48 is provided with the protocol translation information to convert the CPE format transaction data to the interface protocols of the programmable nodes of the AIN network. The firewall server is also provisioned with the security access information to enable limited access by the customer premises equipment to the access server 48. After the link between the CPE and the access server is connected, the access server initiates a session with the CPE to receive the service request. After receiving the service request, the access server returns an acknowledgement to the CPE and processes the request by performing the routing and translation functions. If necessary, the access server suspends the call with the CPE and generates a TCAP query message to the ISCP in order to obtain additional call processing data. After the access server has processed the service request by translating the service request and the transaction data stored therein, the access server outputs the translated service request to the appropriate AIN elements in the corresponding protocol(s).

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Jun 22, 1999

US-PAT-NO: 5915008

DOCUMENT-IDENTIFIER: US 5915008 A

TITLE: System and method for changing advanced intelligent network services from customer premises equipment

DATE-ISSUED: June 22, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dulman; Scott	Arlington	VA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
Bell Atlantic Network Services, Inc.	Arlington	VA				02

APPL-NO: 08/ 538935 [\[PALM\]](#)

DATE FILED: October 4, 1995

INT-CL: [06] [H04](#) [M](#) [3/00](#), [G06](#) [F](#) [17/30](#)

US-CL-ISSUED: 379/201; 379/220, 370/466, 395/187.01, 395/200.3

US-CL-CURRENT: [379/221.08](#); [370/352](#), [370/466](#), [379/221.09](#), [379/230](#), [709/200](#)

FIELD-OF-SEARCH: 395/200.01, 395/200.02, 395/200.18, 395/187.01, 395/200.3, 395/200.76, 395/609, 395/610, 395/200.6, 370/467, 370/466, 379/220, 379/201, 379/211, 379/212, 707/9, 707/10

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ART-UNIT: 271

PRIMARY-EXAMINER: Chan; Eddie P.

ASSISTANT-EXAMINER: Kim; Hong

ATTY-AGENT-FIRM: McDermott, Will & Emery

ABSTRACT:

An arrangement (apparatus and method) for enabling subscribers to use an advanced intelligent network (AIN) services to use existing customer premises equipment to remotely provision their services. Subscribers use existing customer premises equipment, such as personal computers, to locally generate transaction data corresponding to AIN services. The transaction data is stored at the customer premises site in a conventional format, such as ASCII. A call from the customer premises equipment is routed to a security access server, also referred to as a firewall server. After complying with the appropriate security protocols, the service request including the transaction data is routed by the firewall server to an access server via a packet switched network. The access server receives the service request from the customer premises equipment in the conventional format. The access server translates the service request into one or more protocols used by network elements that provide the requested service. The access server routes the translated service requests to various AIN elements as needed to implement the service request, for example integrated service control point (ISCP) and one or more central office switches. The disclosed arrangement is particularly effective for AIN service applications requiring user input of a large amount of transaction data, such as a portable number calling application.

27 Claims, 9 Drawing figures



115005692033A

United States Patent 7,197

Ferris

[11] Patent Number: 5,692,033

[45] Date of Patent: Nov. 25, 1997

[54] **AIR QUEUING FOR CALL-BACK SYSTEM**

[75] Inventor: Robert D. Farris, Sterling, Va.

[73] Assignee: Bell Atlantic Network Services, Inc.,
Arlington, Va.

[21] Appl. No.: 589,360

[22] Filed: Jan. 22, 1956

[51] Int. CL^a H4M 3/00

[52] U.S. Cl. 379/67; 379/201; 379/209;
379/207; 379/265

[58] Field of Search 379/265, 266,
379/207, 201, 216, 309, 67, 88, 89, 209,
208, 214

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Primary Examiner—Krista M. Zalc

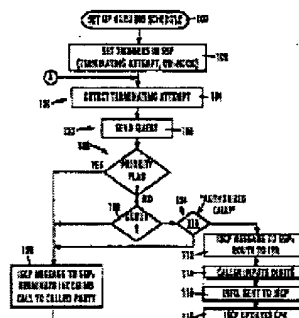
Assistant Examiner—Daniel S. Hunter

Attorney Agent or Firm—Lowe, Pico, LeBlanc & Becker

[57] ABSTRACT

An arrangement in an intelligent network for queuing incoming calls to a destination number during peak calling times and indicating call-backs based on the order that the incoming calls were originally placed in the queue. Translation tables in a subscriber's telephone switching office have terminate attempt triggers and disconnect triggers set to the subscriber's number. A disconnect detection triggers a query from the telephone switching office to an integrated services control point (ISCP), at which point the ISCP accesses the first caller in the queue and sends a message to the originating office serving the first caller to ring the first caller and the subscriber's number. A call to the subscriber's number triggers a query from the telephone switching office serving the subscriber to the ISCP. If the call is from the first caller in the queue, the ISCP instructs the telephone switching office to connect the call to the subscriber. If the call is not from the first caller in the queue, the ISCP instructs the telephone switching office to route the call to an announcement platform, such as an intelligent peripheral, to collect information regarding adding the calling party to the queue. The announcement platform supplies to the ISCP the collected information, including the calling number and the time of call, and the ISCP adds the collected information to the queue.

19 Claims, 8 Drawing Sheets





US005915008A

United States Patent [19]

Dulman

[11] Patent Number: 5,915,008

[45] Date of Patent: Jun. 22, 1999

[54] SYSTEM AND METHOD FOR CHANGING
ADVANCED INTELLIGENT NETWORK
SERVICES FROM CUSTOMER PREMISES
EQUIPMENT

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[21] Appl. No.: 08/538,935

[22] Filed: Oct. 4, 1995

[51] Int. Cl.⁶ H04M 3/00; G06F 17/30

[52] U.S. Cl. 379/201; 379/220; 370/466;
395/187.01; 395/200.3

[58] Field of Search 395/200.01, 200.02,
395/200.15, 187.01, 200.3, 200.76, 609,
610, 200.6; 370/467, 466; 379/220, 201,
211, 212; 707/9, 10

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ABSTRACT

An arrangement (apparatus and method) for enabling subscribers to use an advanced intelligent network (AIN) services to use existing customer premises equipment to remotely provision their services. Subscribers use existing customer premises equipment, such as personal computers, to locally generate transaction data corresponding to AIN services. The transaction data is stored at the customer premises site in a conventional format, such as ASCII A call from the customer premises equipment is routed to a security access server, also referred to as a firewall server. After complying with the appropriate security protocols, the service request including the transaction data is routed by the firewall server to an access server via a packet switched network. The access server receives the service request from the customer premises equipment in the conventional format. The access server translates the service request into one or more protocols used by network elements that provide the requested service. The access server routes the translated service requests to various AIN elements as needed to implement the service request, for example integrated service control point (ISCP) and one or more central office switches. The disclosed arrangement is particularly effective for AIN service applications requiring user input of a large amount of transaction data, such as a portable number calling application.

27 Claims, 8 Drawing Sheets

